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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/978,305	10/17/2001	Robert E. Sterling	T2281-907508	4336

7590 11/04/2002  
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EXAMINER

MOORE, MARGARET G

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 11/04/2002

5

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/978,305	Applicant(s) STERLING ET AL.	
	Examiner Margaret G. Moore	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 September 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 to 13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 to 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
    If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
    a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
        1. ☐ Certified copies of the priority documents have been received.  
        2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
    \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
    a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> | 6) <input type="checkbox"/> Other:  |

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1. Claims 1 to 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

*maintain*  
In all of the claims, it is unclear what is embraced by the term "silanol terminated derivative" in that it is unclear what type of derivation this includes. For instance, does this merely refer to siloxanes of formula (I) having silanol termination, or does this include copolymer derivatives such as polyester or polyether derivatives that have silanol termination.

Claims 3, 6, 9 and 12 are rendered indefinite by the term "may be". For instance, just because the alkyl groups "may be" those listed, it is not clear that they are required to be those listed and thus the metes and bounds of this claim are unclear.

*maintain*  
In claims 4 and 11, a broad copolymer "a copolymer of said polyfluoroalkylsiloxane" is followed by a narrow copolymer "a copolymer of said polyfluoroalkylsiloxane with an alkyl, aryl, or alkyl-aryl-siloxane". Since the second copolymer would appear to have been embraced by the latter, but it is listed as a separate copolymer, it is unclear what is embraced by the first copolymer.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11 to 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Evans et al.

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103  
Evans et al. teach a terpolymeric fluid that is a copolymer of a polyfluoroalkyl-siloxane, an aryl siloxane and an alkyl siloxane. Note for instance the silanol terminated siloxane disclosed as Component E on column 7 and the M stopped siloxane prepared in Example 1. Evans et al. disclose that this copolymer is used as a self bleed additive in heat curable rubbers (i.e. thermosetting resins). Self bleed additives will inherently form on the surface of the cured rubbers, thus meeting the requirement that the concentration on the surface be higher than the concentration in the interior. Note that the 5.8 parts by weight of component E meets the claimed requirement of *about* 5% by weight.

5. Claims 1 to 4 and 6 to 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi ('824).

Kobayashi teaches fluorosilicone polymers that meet the additive in claim 1. See for instance that prepared in Examples 1 to 3. Note that the molecular weight of these siloxanes indicate a repeating unit that corresponds to the claimed value of "n". The bottom of column 5 discloses that these fluorosilicones have a low surface tension and are useful as an additive for modifying the physical properties of synthetic rubbers and resins. Since the fluorosilicones are described as having low surface tension, the skilled artisan would immediately envision adding the fluorosilicones to a synthetic rubber or resin having a higher surface tension. In addition, the skilled artisan would immediately envision thermosetting resins as an operable synthetic rubber or resin to which the fluorosilicone can be added. From this the skilled artisan would have been motivated to add the fluorosilicones taught by Kobayashi to a thermosetting resin in an effort to decrease the surface tension thereof, a known benefit and property associated with the addition of fluorosilicones to synthetic rubbers and resins, as disclosed by Kobayashi. With regards to the claimed amount, note that It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. That is, it would have been within routine experimentation and/or optimization for the skilled artisan to determine the operable amount of the fluorosilicone additive, thereby rendering obvious this claimed amount.

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6. Claim 5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

None of the prior art teaches or suggests the method steps required by claim 5.

7. Kobayashi et al. ('421) is cited as being of general interest. This teaches adding a fluorosilicone to an organic resin, but fails to teach one meeting the formula (I) or a derivative thereof as required by the instant claims.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 703-308-4334. The examiner can normally be reached on Mon., Wed., Thurs. and Friday, 10am to 4pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9311 for regular communications and 703-872-9310 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
Margaret G. Moore  
Primary Examiner  
Art Unit 1712

mgm  
October 28, 2002